

Portage Creek Sediment Remediation Project Kalamazoo, Michigan

Post-Sediment Removal Structure Feature Assessment Removal Area SA6



Prepared For:



Prepared By:



F&V Project Number: 809930
August, 2012

General Notes:

- The Post-Sediment Removal Structural Feature Assessment is based on observable conditions at the time of assessment and is not a guarantee of the condition of the various structures or an evaluation of the potential for long term impacts of the sediment removal process.
- No testing of materials or other in-depth evaluation was performed as part of the assessment.
- Structures are numbered corresponding to the Pre-Sediment Removal Structural Feature Assessment. Refer to the corresponding report for comparison of pre- and post-sediment removal conditions.

Designation: SA6-S01

Location: SA6-S01 is the Stockbridge Avenue Bridge crossing Portage Creek, just south of the southern limits of area SA6.

Description: SA6-S01 is a single span bridge. Constructed in 1984, the superstructure consists of side by side prestressed concrete box beams, concrete sidewalks, concrete parapet railings and an asphalt wearing surface. The substructure consists of concrete caps, presumably constructed in 1984, which carry the superstructure and bear on older concrete abutments.

Assessment Findings:

- The northwest curb head has been cut to provide site access for vehicular traffic. The adjacent sidewalk has been replaced. It is recommended that the City of Kalamazoo be contacted to confirm that the curb does not need to be replaced.
- The northwest quadrant has been restored and early grass growth was noted.
- Construction fencing is still in place in the northwest quadrant.



Structure viewed from southwest approach area



Elevation view of structure



Curb cut for access in the northwest quadrant



Sidewalk replacement in the northwest quadrant



Early grass growth in the northwest quadrant

Designation: SA6-S02

Location: SA6-S02 is located on the west bank of Portage Creek approximately 50 feet north of Stockbridge Avenue.

Description: SA6-S02 is an upturned 8-inch diameter steel pipe of unknown purpose.

Assessment Findings:

- The structure does not appear to have been impacted during sediment removal.



Overall view of the structure from the channel



Heavy scaling and bank undermining at the base of the structure

Designation: SA6-S03

Location: SA6-S03 is located on the east bank of Portage Creek just north of Stockbridge Avenue.

Description: SA6-S03 is a series of concrete slabs placed along the bank for erosion protection.

Assessment Findings:

- The structure does not appear to have been impacted during sediment removal.



Overall view of the structure with the railroad tracks in the background



View of the slabs adjacent to the northeast wingwall extension of the Stockbridge Bridge

Designation: SA6-S04

Location: SA6-S04 is located on the west bank of Portage Creek approximately 100 feet north of Stockbridge Avenue.

Description: SA6-S04 is a 12-inch diameter clay storm sewer outlet with concrete collar/headwall.

Assessment Findings:

- The structure is severely overgrown with vegetation.
- The end of the headwall and clay pipe appear to have been spalled during sediment removal. It is recommended that the City of Kalamazoo be contacted to determine whether a clean saw cut on the end of the structure is required.



View of the overgrown outlet from the channel



Spalling on end of headwall and clay pipe



Overall view of the overgrown structure

Designation: SA6-S05

Location: SA6-S05 is located on the west bank of Portage Creek approximately 200 feet north of Stockbridge Avenue.

Description: SA6-S05 is a small concrete wall extending into the channel approximately 4 feet near the water surface. Its purpose could not be identified during the Pre-Sediment Removal Structural Feature Assessment, however, with more favorable water levels, it was noted that the structure is a concrete collar/headwall around a 4" outlet.

Assessment Findings:

- The bank area around the structure has been restored with stone riprap.
- The structure does not appear to have been impacted during sediment removal.



View of the structure from the channel



View of the structure from the upstream bank

Designation: SA6-S06

Location: SA6-S06 is the sanitary sewer running along the west side of Portage Creek and crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S06 is a 48-inch diameter reinforced concrete pipe, which reduces to 36-inch where it crosses the creek. There are manholes on both sides of the creek crossing. According to the construction drawings, the creek crossing is quite shallow, however, probing did not reveal its location.

Assessment Findings:

- The area parallel to the creek has been restored, however, grass growth was not yet evident.
- Chain link fencing has been replaced along the west bank of the creek.
- The manhole cover on the east side of the creek was installed upside-down and should be reversed.
- Because the sewer itself is not observable from the surface, it is recommended that it be televised and compared to televising performed prior to sediment removal, if available.



View of the restored area through the new chain link fencing



View of the restored area through the new chain link fencing



Manhole on the west side of the creek



Upside-down manhole cover on the east side of the creek



View of the west manhole looking south

Designation: SA6-S07

Location: SA6-S07 is located on the east bank of Portage Creek, approximately 30 feet north of the sanitary sewer crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S07 is a section of chain link fence extending into the channel area.

Assessment Findings:

- The fencing has been removed and replaced, however, the end section into the channel was not yet installed at the time of assessment.



View of the fence from the southeast



Missing end section on new fencing

Designation: SA6-S08

Location: SA6-S08 is located on the west bank of Portage Creek, approximately 30 feet north of the sanitary sewer crossing between Stockbridge Avenue and Lake Street and 5 feet from the waterline.

Description: SA6-S08 is a utility pole and guy wire supporting an overhead utility crossing.

Assessment Findings:

- The structure does not appear to have been impacted during sediment removal.



Pole and guy area viewed from the channel



View of pole and guy from the north

Designation: SA6-S09

Location: SA6-S09 was located in the channel area of Portage Creek approximately 50 feet north of the sanitary sewer crossing between Stockbridge Avenue and Lake Street and 3 feet from the bank.

Description: SA6-S09 was a pair of steel posts installed in the channel for an unknown purpose.

Assessment Findings:

- Structure SA6-S09 was removed during sediment removal.



Bank restoration in area SA6-S09 was located

Designation: SA6-S10

Location: SA6-S10 is located on the west bank of Portage Creek, approximately 100 feet north of the sanitary sewer crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S10 is a 12-inch diameter PVC storm sewer outlet.

Assessment Findings:

- Undermining of the outlet was improved during bank restoration.
- The failing concrete splash pad has been replaced with an improved riprap spillway.
- The capped PVC outlet has been removed.



View of the outlet from the top of bank



View of the outlet from the channel area

Designation: SA6-S11

Location: SA6-S11 was located on the west bank of Portage Creek, approximately 150 feet north of the sanitary sewer crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S11 was a steel outlet pipe located at the waterline.

Assessment Findings:

- Structure SA6-S11 was removed during sediment removal.

Structure: SA6-S11

Date: August 15, 2012



Bank restoration in area SA6-S11 was located

Designation: SA6-S12

Location: SA6-S12 was located on the west bank of Portage Creek, approximately 200 feet north of the sanitary sewer crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S12 was a steel outlet pipe located at the waterline.

Assessment Findings:

- Structure SA6-S11 was removed during sediment removal.

Structure: SA6-S12

Date: August 15, 2012



Bank restoration in area SA6-S12 was located

Designation: SA6-S13

Location: SA6-S13 was located on the east bank of Portage Creek, approximately 10 feet south of the overhead electrical crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S13 was a chain link fence section extending approximately 6 feet into the channel.

Assessment Findings:

- The chain link fence was removed in conjunction with sediment removal and has not been replaced. It is recommended that the property owner be contacted to confirm that replacement is not required.



Bank restoration in area SA6-S13 was located

Designation: SA6-S14

Location: SA6-S14 is the overhead electrical crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S14 is an overhead crossing with a utility pole west of the creek, set back from the waterline.

Assessment Findings:

- The guy wire adjacent to the pole was eliminated in conjunction with sediment removal.
- The pole does not appear to have been impacted during sediment removal.



View of the pole from the downstream channel



View of the pole from the north

Designation: SA6-S15

Location: SA6-S15 is located on the west side of Portage Creek just north of the overhead electrical crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S15 is a City of Kalamazoo storage building with asphalt access road between the building and Portage Creek.

Assessment Findings:

- The building does not appear to have been impacted during sediment removal.
- The asphalt access road appears to have been damaged during sediment removal. We understand that it is being replaced to the limits marked in paint.



View of building looking north



Severe deterioration of the asphalt access road



Severe deterioration of the asphalt access road



Severe deterioration of the asphalt access road



Severe deterioration of the asphalt access road



View of building looking south

Designation: SA6-S16

Location: SA6-S16 is located on the east bank of Portage Creek approximately 100 feet north of the overhead electrical crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S16 is a 24-inch diameter concrete pipe storm sewer outlet. It has a headwall consisting of manhole blocks.

Assessment Findings:

- It appears that the retaining wall blocks have been removed from the top of the headwall, however, they were not functional prior to sediment removal.
- The headwall itself and outlet do not appear to have been impacted during sediment removal.



View of the structure from the channel

Designation: SA6-S17

Location: SA6-S17 was located on the east bank of Portage Creek approximately 150 feet north of the overhead electrical crossing between Stockbridge Avenue and Lake Street.

Description: SA6-S17 was a clay tile, approximately 8-inch diameter, extending approximately 2½' into the channel.

Assessment Findings:

- Structure SA6-S17 was removed during sediment removal.



Bank restoration in area SA6-S17 was located

Designation: SA6-S18

Location: SA6-S18 is located on the east bank of Portage Creek approximately 150 feet south of Lake Street.

Description: SA6-S18 is a fence section extending into the channel.

Assessment Findings:

- The fence has been removed and replaced, however, the last section had not yet been installed at the time of assessment.



View of the fence from the upstream channel



View of the fence from the channel

Designation: SA6-S19

Location: SA6-S19 is 504 East Lake Street, located on the southeast quadrant of Lake Street and Portage Creek.

Description: SA6-S19 is a two-story single family home with concrete foundation walls. There is a chain link fence between the home and the channel.

Assessment Findings:

- The fence between the structure and channel has been replaced.
- The bank along the structure has been restored.
- Cracking in the foundation appears to be similar in nature to that observed prior to sediment removal.



Fence replacement and bank restoration adjacent to structure



View of structure from west bank



View of structure from channel



Cracking in northwest area of foundation wall



Cracking in southwest area of foundation wall



Cracking in southwest area of foundation wall

Structure: SA6-S19

Date: August 15, 2012



View of structure from northwest

Designation: SA6-S20

Location: SA6-S20 is the Lake Street Bridge crossing Portage Creek, just north of the northern limits of SA6.

Description: SA6-S20 is a single span bridge constructed in 1986. The superstructure is composed of side by side prestressed concrete box beams, concrete sidewalks, concrete parapet railings and an asphalt wearing surface. The substructure is composed of concrete curtain walls supported on cast in place concrete piles. Concrete block type retaining walls were constructed in all 4 quadrants to support the slopes.

Assessment Findings:

- Sediment removal operations were ongoing in SA5-D during the assessment. A final assessment of the structure will be completed with the assessment for SA5-D.
- The area around the block walls in the southeast and southwest has been restored.
- Fencing was replaced in the southwest.
- Temporary protective fencing has been installed on the south fascia.
- The structure does not appear to have been adversely impacted during sediment removal in SA6.



View of the structure from the northwest approach area



Elevation view of the structure from the southwest bank



Fence replacement and restoration in southwest quadrant



Bank restoration around southwest block wall



Bank restoration around southeast block wall